Department of Genetics, University of Wisconsin Madison 6, Wis., U.S.

November 13, 1951.

Dear Dr. Rizet:

I have just now finished a careful reading of your dissertation on Podospora anserina, of which you kindly sent me a reprint some time ago. A number of points were of considerable interest, but I would like to discuss one in particular: the postulated regular crossover between the centromere and signe.

In your text, you mention the possibility of postreduction of the centromeres which would, of course, lead to much the same result. I am not clear on the argument by which this is excluded. If the centromere of the mating type chromosome is regularly postreduced, and signe very closely linked to it (as in N. tetrasperma), the Ff locus might then be located distal to signe. The 2% of exceptions for +/- might then be either pre-reductions or certain crossovers.

A mechanism that might lead to this situation has been suggested by Lindegren (in an unpublished ms.) He reports finding a peticentric inversion in N. crassa. He claims that one effect of the inversion, when heterozygous, is to produce postreduction of the included centromere. This might be a consequence of failure of proper synapsis, and thus of disjunction, imposed by the structural difference. Such an inversion, if it includes +/- as well, would also ~~give~~ reduce crossing-over between centromere and signe, which is necessary on this hypothesis.

I would be interested to hear your reactions to this suggestion, and look forward to a continuing exchange of publications.

Please convey my best regards to M. et Mme. Ephrussi.

Yours sincerely,

Joshua Lederberg